

# Deschutes River, Percival Creek, and Budd Inlet Tributaries Multi-parameter TMDL

Deschutes Watershed Group Meeting  
September 20, 2018

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## Goals:

Understand EPA's action on the Deschutes TMDL

Awareness of replacement TMDLs and future opportunities for public input

Discuss my role

Note on history of project

Understand that this has been worked on for a long time, since 2002

The technical work and modeling is not where the majority of our concerns are, though we will look to see if any updates should be made

Moving forward, our plan is to address some gaps that were missing from the TMDLs in order to fulfill our regulatory requirements, and also to bolster some aspects of the TMDL (stormwater and downstream standards)

We will work from existing model to do this

Note on the implementation plan - not part of TMDL action, but still useful and informative, especially with RA

## EPA's Decision on the Deschutes TMDL

- June 29, 2018
- Partial Approval/Partial Disapproval
  - Out of 73 waterbody-pollutant pairs, **EPA disapproved 37**, approved 26, and took no action on 10.
- EPA is required to establish replacements for any disapproved TMDLs.

Explain terminology here: waterbody-pollutant pair

Discrete 'actions' for each TMDL, or WB-pollutant pair

## EPA's Decision on the Deschutes TMDL

### Approval:

- Temperature TMDLs for the mainstem Deschutes R., Black Lake Ditch, and Percival Creek

### Disapproval:

- Sediment TMDL for the mainstem Deschutes R.
- Bacteria TMDLs (All)
  - \*Took 'no action' for a handful of tributaries which are no longer listed for bacteria
- Temperature TMDLs for remaining tributaries
- DO TMDLs (All)
- pH TMDLs (All)

As I go through our rationale, keep in mind that I'm going through our major reasons for disapproval (i.e. not meeting strict regulatory requirements)

**Ex. 5 Deliberative Process (DP)**

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**Fine Sediment Waterbody-pollutant Pair**

Waterbody	1996 Listing ID	2010 Listing ID <sup>1</sup>	Decision
Deschutes River	WA-13-1020	6232	Disapprove

## Rationale for Disapproval Actions - Sediment

- Submittal document lacks a linkage analysis between the TMDL water quality target and the assigned loading capacity.
  - Water quality target = 12% embedded fine sediment (based on Washington Forest Practices Board 'good habitat' rating & other literature values)
  - Loading capacity = 21,615 yd<sup>3</sup>/year (based on estimated current loading from natural sources, i.e. no known human sources)

Other literature = EPA's Suspended and Bedded Sediment Guidance (2003)

NOTE: EPA agrees with the target chosen, just not how the assigned load capacity will achieve this target

EPA compared the percent reductions required by both targets, though a direct comparison is not possible since the embedded fines percentage and sediment yield are measures of different parameters. Ecology identified that a percent reduction in deposited fines in the range of 30% - 46% was needed to achieve the in-situ target of 12%. The sediment yield target of 21,615 yd<sup>3</sup>/yr represents a 21% percent reduction from the current annual mean fine sediment load of 27,315 yd<sup>3</sup>/yr

**Bacteria Waterbody-pollutant Pairs**

Waterbody	1996 Listing ID	2010 Listing ID <sup>1</sup>	Decision
Adams Creek	---	45462	Disapprove
		45695	Disapprove
Butler Creek	---	45471	No action
Butler Creek, SW F	---	45342	No action
Ellis Creek	WA-13-0020	45480	Disapprove
Indian Creek	WA-13-1300	3758	Disapprove
		45213	Disapprove
		46410	Disapprove
		(74218)	Disapprove
Mission Creek	WA-13-1380	45212	Disapprove
		46102	Disapprove
Moxlie Creek	WA-13-1350	3759	Disapprove
		3761	Disapprove
		45252	Disapprove
		46432	Disapprove
Schneider Creek	---	45559	Disapprove
Ayer (Elwanger) Creek	WA-13-1015	5849	No action
Chambers Creek	WA-13-1014	45560	No action
Deschutes River	WA-13-1010	46499	No action
		46500	No action
	WA-13-1020	9881	No action
		46210	No action
Reichel Creek	WA-13-1022	3763	Disapprove
		45566	Disapprove
Spurgeon Creek	WA-13-1016	46061	Disapprove
Percival Creek	WA-13-1012	46103	No action
		46108	No action

10 WB-pollutant pairs are no longer listed as impaired for bacteria; thus, EPA did not take any action on those TMDLs.

## Rationale for Disapproval Actions - Bacteria

Waterbody	1996 Listing ID	2012 Listing ID
Adams Creek	---	45462
		45695
Ellis Creek	WA-13-0020	45480
		3758*
Indian Creek	WA-13-1300	45213*
		46410*
		74218*
Mission Creek	WA-13-1380	45212*
		46102*
		3759*
Moxlie Creek	WA-13-1350	3761*
		45252*
		46432*
Schneider Creek	---	45559*
Reichel Creek	WA-13-1022	3763*
		45566*
Spurgeon Creek	WA-13-1016	46061*

- Asterisks:

- 14 did not meet public participation requirements for supplemental information and calculations newly submitted in 2017.

- Remaining three:

- Loadings are not protective of adjacent downstream (Budd Inlet) criterion protecting shellfish designated uses.

Disapproved TMDLs: (1) do not implement Ecology's applicable water quality standard for protecting downstream uses, and (2) are not constructed to attain and maintain applicable water quality standards as required by 40 CFR § 130.7(c)(1).

The water quality standards language in WAC 173-201A-260(3)(b)-(d) states:

"(b) Upstream actions must be conducted in manners that meet downstream water body criteria. Except where and to the extent described otherwise in this chapter, the criteria associated with the most upstream uses designated for a water body are to be applied to headwaters to protect nonfish aquatic species and the designated downstream uses.

(c) Where multiple criteria for the same water quality parameter are assigned to a water body to protect different uses, the most stringent criterion for each parameter is to be applied.

(d) At the boundary between water bodies protected for different uses, the more stringent criteria apply."

Temperature Waterbody-pollutant Pairs

Waterbody	1996 Listing ID	2010 Listing ID <sup>1</sup>	Final Action
Deschutes River	WA-13-1610	6576	Approve
		7599	Approve
		48719	Approve
		48711	Approve
		48712	Approve
		48713	Approve
		48714	Approve
		48715	Approve
		48717	Approve
		48718	Approve
	WA-13-1620	9439	Approve
		7588	Approve
		7592	Approve
		7593	Approve
		7595	Approve
		48720	Approve
		48721	Approve
		48724	Approve
		48726	Approve
		48726	Approve
Huckleberry Creek	WA-13-1624	3757	Disapprove
Reichel Creek	WA-13-1622	48666	Disapprove
Tempo Lake Outlet	---	48696	Disapprove
Ayer (Elwanger) Creek	WA-13-1615	(73229)	Disapprove
Unnamed Spring to Deschutes River	---	48923	Disapprove
Black Lake Ditch	---	48733	Approve
		48734	Approve
		48735	Approve
		42321	Approve
Percival Creek	WA-13-1612	48249	Approve
		48727	Approve
		48729	Approve



## Rationale for Disapproval Actions - Temperature

- Ayer Creek, Huckleberry Creek, Reichel Creek, Tempo Lake Outlet, and Unnamed Spring to Deschutes River:
  - The submittal document does not assign loadings, and thus does not include fundamental TMDL components required by EPA regulations [loading capacity, allocations for point and nonpoint sources, margin of safety]

**DO Waterbody-pollutant Pairs**

Waterbody	1996 Listing ID	2010 Listing ID <sup>1</sup>	Decision
Ayer (Elwanger) Creek	WA-13-1015	5851	Disapprove
Deschutes River	WA-13-1010	10894	Disapprove
		47753	Disapprove
		47754	Disapprove
	WA-13-1020	47756	Disapprove
Lake Lawrence Creek	---	47696	Disapprove
Reichel Creek	WA-13-1022	47714	Disapprove
Black Lake Ditch	---	47761	Disapprove
		47762	Disapprove
Percival Creek	WA-13-1012	48085	Disapprove
		48086	Disapprove

## Rationale for Disapproval Actions - DO

- Ayer Creek, Lake Lawrence Creek, Reichel Creek, and Black Lake Ditch:
  - The submittal document does not assign loadings, and thus does not include fundamental TMDL components required by EPA regulations [loading capacity, allocations for point and nonpoint sources, margin of safety].

## Rationale for Disapproval Actions - DO

- Mainstem Deschutes River:

### **Ex. 5 Deliberative Process (DP)**

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## Rationale for Disapproval Actions - DO

- Percival Creek:

### **Ex. 5 Deliberative Process (DP)**

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**pH Waterbody-pollutant Pairs**

Waterbody	1996 Listing ID	2010 Listing ID <sup>1</sup>	Decision
Adams Creek	---	50965	Disapprove
Ayer (Elwanger) Creek	WA-13-1015	5850	Disapprove
Black Lake Ditch	---	50990	Disapprove

## Rationale for Disapproval Actions - pH

- Adams Creek, Ayer Creek, and Black Lake Ditch
  - The submittal document does not assign loadings, and thus does not include fundamental TMDL components required by EPA regulations [loading capacity, allocations for point and nonpoint sources, margin of safety].

## Next Steps

- EPA will develop replacement TMDLs for the disapproved segments
  - Want to build off of existing model where possible
- Currently: we are putting together a technical approach and draft timeline
  - Your help: Do you know of any data sources outside of EIM?
- Regular updates with this group as we pass major milestones
  - Suggestions for effective ways to share?